

Field Review Comment Metric

Originating Office: AIR-130	Document Description: AC 20-182A	Project Lead/Reviewer Lee Nguyen	Reviewing Office:	Date of Review: April 2016
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	Commenter Name	Section # and Page #	Comment	Suggested Change and Rationale	Disposition
1.	Vonnie Tong (ANM-130L)	Section 1.1, page 1 (the last two sentences)	The guidance is applicable for part 23, 25, 27, and 29 aircraft. But “For forward-looking windshear and/or turbulence detection capability, the guidance in this AC applies to fixed-wing airplane installations”. A clarification may be needed for consistency for these two paragraphs.	This guidance generally is applicable for part 23, 25, 27, and 29. But for Equipment Class A (forward-looking windshear detection) and Class B (forward-looking turbulence detection) (<i>referring to the TSO-C63e</i>), the guidance only applies to fixed-wing airplane installation.	Accepted. This AC addresses installation guidance, not equipment minimum performance associated with the equipment classes defined in TSO-C63e. Clarified last sentence of paragraph 1.1 as follows: For forward-looking windshear and/or turbulence detection capability, the guidance in this AC applies to parts 25 and 23 fixed-wing airplane installations.
2.	Vonnie Tong (ANM-130L)	Section 5.7, page 3	This paragraph identifies if the radar system has the downlink capability but did not identify what type of radar data will be transmitted. Since there is the requirement to “ensure” the system of transmitting the radar data as specified, it would be difficult for the ensuring process/procedure if we don’t specify the radar data.	Define the downlink “raw” radar data type to be transmitted from TBD source to TBD destination via TBD protocol.	Partially accepted. The intent of paragraph 5.7 is to provide general guidance that if the radar system includes downlink capability, then follow the manufacturer’s recommended instructions, e.g. installed/wired per the

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					<p>installation instructions, to ensure that the system is capable of transmitting the radar data as specified by the manufacturer. This AC does not address data link transactions and message protocol.</p> <p>Clarified paragraph 5.7 as follows:</p> <p>“If the radar system includes downlink capability, follow the radar manufacturer’s recommended procedures to ensure the system is capable of transmitting the radar data as specified by the manufacturer.”</p>
3.	Vonnie Tong (ANM-130L)	Section 6.1.3, page 4	Typo: Paragraph 5.b (2) does not exist in the AC. Correct the following statement “...visual and aural alerts as specified in paragraph 5.b (2) of this AC.”	Change 5.b (2) to 6.2.1 (confirm if appropriate reference).	<p>Accepted.</p> <p>Corrected paragraph 6.1.3 as follows:</p> <p>“When the forward-looking windshear function is enabled,</p>

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					you must ensure the system will automatically activate without flight crew intervention during descent to approach at an altitude sufficient to allow visual and aural alerts as specified in paragraph 6.2.2 of this AC.”

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1.	Bob Stoney (ANM-160S)	Section 10, page 9 (AFM/S), paragraphs 10.2 and 10.7	<p><u>BACKGROUND</u></p> <p>Applicants sometimes confuse a “system limitation” with information appropriate in the certificate limitations section of the R/AFM/S. The AFM limitations section is for listing limits necessary to promote safe conduct of flight (ref: 2X.1581). The limitations section should <i>not</i> be used to list system “drawbacks,” constraints, or design features, or to describe a lack of capability. Additionally, the limitations section should not be used as a place to simply highlight <i>important</i> information that is otherwise not limiting in nature.</p> <p>Applicants sometimes do not understand this distinction and put information in the limitations section that:</p> <ol style="list-style-type: none"> 1. May be unclear 2. Is not directive in nature, and may be misinterpreted 3. Can detract from the overall usefulness of the limitations section by “watering down” true limitations. Extraneous and unnecessary information in the limitations section should be avoided. 	<p>Delete paragraph 10.7 and renumber.</p> <p>Change paragraph 10.2 to read: “Provide limitations that are necessary for the safe operation of the weather radar system.”</p>	<p>Accepted.</p> <p>Changed as suggested.</p>
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4.	Ray Mei (ANM-130S)	Section 6.2.1 page 4	“...the latest revision of the following ACs for parts 23, 25, 27, and 29 aircraft.” Forward-looking wind shear only applies to fixed wings.	Delete parts 27 and 29.	Accepted. Changed as suggested.
5.	Dean Thompson (ANM-130S)	Section 7.1 page 6	The term “airplane” is located in 3 places.	Change “airplane” to “aircraft” to be more consistent and match TSO-C63d and TSO-C63e.	Accepted. Changed as suggested.
6.	Ray Mei (ANM-130S)	Section 9.2, page 7	“...as described in paragraphs 8 and 8.a. of this AC...” There is no section 8.a in this AC.	Correct the typo.	Accepted. Corrected last sentence of paragraph 9.2 as follows: “Installation testing of the forward-looking windshear function often relies on general weather radar functional testing as described in paragraphs 9, 9.1.1 and 9.1.2 of this AC and integration testing versus dedicated forward-looking windshear flight testing.”
7.	Ray Mei (ANM-130S)	Section 9.3, page 8	“...as described in paragraphs 8 and 8.a. of this AC...” There is no section 8.a in this AC.	Correct the typo.	Accepted. Corrected third sentence of paragraph 9.3 as follows: “Installation testing of these functions often relies on general

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					weather radar functional testing as described in paragraphs 9.1.1 and 9.1.2 of this AC and integration testing versus dedicated flight testing.”
8.	ACE-114 D. Jenson	6.1.3, pg 4	Reference 5.b(2) does not look correct	Correct reference as necessary	Accepted. Corrected paragraph 6.1.3 as follows: “When the forward-looking windshear function is enabled, you must ensure the system will automatically activate without flight crew intervention during descent to approach at an altitude sufficient to allow visual and aural alerts as specified in paragraph 6.2.2 of this AC.”
9.	ACE-111 J. Brady	9.2.1 pg 7/8	Minor comment: “Flying in or near storm cells can be extremely hazardous. Flight crews should exercise good judgment for safe flight based on knowledge of their own abilities and of the capability of the aircraft when considering approaching or penetrating any storm cell or turbulent area.” This statement, although true, has nothing to do with “Airworthiness Approval for Aircraft	The statement could be removed from the Airworthiness Approval AC.	Accepted. Changed the statement to a note as follows: “ Note: Flying in or near storm cells can be extremely hazardous. Flight crews should exercise good judgment for safe flight based on

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			Weather Radar Systems.” It is an operational statement and not an airworthiness approval requirement.		knowledge of their own abilities and of the capability of the aircraft when considering approaching or penetrating any storm cell or turbulent area.”
10.	ASW-140 Jonathan Kim	4.1 & 4.2 Page 2	Both paragraphs are calling out TSO-C63e	FAA published TSO-C63d and not TSO-C63e. The AC should only specify what is on the latest TSO version.	Not accepted. This draft AC references the draft TSO-C63e, <i>Airborne Weather Radar Equipment</i> . It is planned to issue the draft AC and TSO at the same time.
11.	ASW-140 Jonathan Kim	6.1.3 Page 4	“... specified in paragraph 5.b (2) of this AC.”	There is no paragraph 5.b (2). Please correct paragraph reference.	Accepted. See disposition to comment 3.